

REMARKS

Claims 1-35 are pending in the present Application. Claims 1, 9-10, 21-22, 29-30 have been amended, and claims 31-35 have been canceled, leaving Claims 1-30 for consideration upon entry of the present Amendment.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 112, First and Second Paragraphs

Claims 9, 10, 21, 22, and 29 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner states that substituents T_4 and D_3 of the formula $R_7T_4D_3(OY)_3$ are not defined in such a manner so as to allow one of ordinary skill in the art to make and use the invention.

Claims 9, 10, 21, 22 and 29 further stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner alleged that substituents R_7 , T_4 and D_3 of the formula $R_7T_4D_3(OY)_3$ are not defined in such a manner so as to allow one of ordinary skill in the art to make and use the invention.

Applicants respectfully traverse these rejections. The proper tests of both enablement and definiteness depend on the understanding and knowledge of one of ordinary skill in the art. MPEP 2164.01 (enablement depends on whether the disclosure contains sufficient information regarding the subject matter of the claims so as to enable one skilled in the pertinent art to make and use the claimed invention); *Seattle Box Co. v. Industrial Crating and Packing, Inc.*, 731 F.2d 818, 826, 221 U.S.P.Q. 568, 573-74 (Fed. Cir. 1984) (indefiniteness is depends on whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification).

As noted by the Examiner, the specification contains definitions for R, T, and D, but not “ R_7 ,” “ T_4 ,” or “ D_3 .” This is because the subscripts in each of these formulas refers to the number or R, T, and D units, rather than a particular type of R, T, or D unit. For instance, “ T_4 ” means “4

repeating units of the T group” and “D₃” means “3 repeating units of the D group.” One of ordinary skill in the art would understand that these were subscripts, because seven R units, 4 T units, and 3 D units are needed in order to fulfill the valency requirement for the silsesquioxanes. Note that subscripts are also used to indicate numbers of atoms or R groups in Lichtenhan, which was cited by the Examiner.

One of ordinary skill in the pertinent art would accordingly be able to make and use the claimed invention, and understand the scope of the claims. It is therefore believed that Claims 9, 10, 21, 22, 29, and 30 properly comply with 35 U.S.C. § 112, first and second paragraphs, and reconsideration and allowance are respectfully requested.

As suggested by the Examiner, claims 9-10, 21-22, and 29 have each been amended to correct the typographical error “arylakyl” to “arylalkyl.”

Double Patenting

A terminal disclaimer accompanies this response.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-8, 11-20 and 24-30 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,484,867 (“Lichtenhan”). In making the rejection, the Examiner states that

It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to use the specific polyhedral oligomeric silsesquioxanes of Lichtenhan et al. as those polyhedral oligomer silsesequioxanes of US Patent 6653365 to formulate dental compositions. Since Lichtenhan et al is credited with first producing the polyhedral oligomeric silsesequioxanes.

(Office Action dated 2/14/06, page 6)

Applicants first note that, to the extent that the Examiner is relying on US Patent 6653365 to Jia, this patent is disqualified as a proper §103 prior art under MPEP 706.02(l)(1). Jia is a prior art only under 35 U.S.C. §102(e) since the filing date of the instant application (9/19/2003) is before the patent issue date of Jia (11/25/2003). According to MPEP 706.02(l)(1), effective

November 29, 1999, subject matter which was prior art under former 35 U.S.C. §103 via 35 U.S.C. §102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” The instant application and Jia were, at the time the instant invention was made, owned by Pentron Corp. or subject to an obligation of assignment to Pentron Corp.

Applicants further note that the instant claims are not obvious over Lichtenhan alone because there is no teaching or suggestion in Lichtenhan to use the materials disclosed therein in a dental restorative composition or dental restoration; no motivation to use such materials in a dental restorative composition or dental restoration; and no expectation of success in so doing. Lichtenhan merely discloses a process for preparation of reactive polyhedral oligomeric silsesquioxanes and the subsequent synthesis of polysilsesquioxanes (Abstract).

Claim 1 has been amended to clarify that the instant claims are all directed to dental restorative composition and methods of use. Antecedent basis is found throughout the specification for this amendment, and suitable ethylenically unsaturated resin compositions are disclosed in the specification and known by those of ordinary skill in the art. While Lichtenhan et al. may have been the first to describe the reactive silsesquioxanes presently claimed, there must be some suggestion in the prior art to use the materials in dental restorative compositions, and most importantly, the prior art must provide the expectation of success in using these materials. In the absence of any prior art disclosure, motivation, or expectation of success in making the claimed combination, claim 1, and all of the claim dependent thereon are nonobvious over Lichtenhan. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejections and allowance of the claims.

Information Disclosure Statement

A new PTO-1449 form including both the month and the year of the four publications in the Other Information section is submitted herewith. Applicants respectfully request that the Examiner consider these references and initial all references on the newly submitted PTO-1449 form appropriately.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein as amended should now be allowable to Applicants. Accordingly, reconsideration and allowance are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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